

Claims

1. Solid oxide fuel cell with a planar support in
5 form of a porous plate structure supporting on one planar
surface a layer of electrode active material and with in-
ternally elongated gas supply channels formed inside the
structure.

10 2. Solid oxide fuel cell of claim 1, wherein a pla-
nar surface on opposite side to the surface supporting
electrode active material being provided with a dense layer
of gas impermeable and electronic conductive material.

15 3. Solid oxide fuel cell of claim 2, wherein the
dense layer is a ceramic and/or metallic layer.

20 4. Solid oxide fuel cell of claim 1, wherein the
electrode layer is active in electrochemical anode reac-
tions and wherein the layer is covered by a further dense
layer of electrolyte material.

25 5. Solid oxide fuel cell of claim 1, wherein the po-
rous plate is made from ferritic stainless steel, nickel-
based alloys and/or high chromium alloys.

6. Solid oxide fuel cell of claim 1, wherein rim of
the porous plate is gas impermeable.

30 7. Solid oxide fuel cell of claim 1, wherein rim of
the porous plate is supporting a dense layer of electrolyte
material.

8. Solid oxide fuel cell of claim 1, wherein the porous structure is catalytic active in conversion of feed gas to fuel cell reactant gas.

5 9. Use of a solid oxide fuel cell according to anyone of the preceding claims in generation of power from particulate matter containing gas.